House Joint Resolution No. 153 Feasibility Study
Generic Questions
Arlington County Responses
August 10, 2004

1. Please identify the major issues/questions that should be addressed by the HJR 153 feasibility study.

The undergrounding of overhead utilities benefits a community by eliminating utility poles in the public walkways, allowing natural tree growth without sometimes brutal but necessary tree trimming, enhancing the streetscape to promote economic health in commercial area, and reducing utility outages during storms. However, removing overhead utility wires is one of the most complicated and costly components of improving a street right-of-way. The major issue is funding the improvement.

Arlington County has used general funds, bond funds and developer contributions to fund the removal of overhead utilities, however, the tremendous costs dictates that only a single project is completed each year. Arlington is currently exploring Tax Improvement District funding as a revenue source.

In California, Pacific Gas and Electric (PG&E) will, at a municipality's request, place a surcharge on customers monthly bills to finance the costs of burying the utility wires and to remove the utility poles (it is called the Rule 20 Electric Undergrounding Program).

2. Please describe the potential <u>benefits</u> to the public and utility companies associated with the undergrounding of overhead distribution lines.

The potential benefits to the public and utility companies are:

- Improve the visual aesthetic – utility undergrounding will avoid or eliminate heavy concentration of overhead utility facilities
- Create an open, pedestrian-friendly walkway – removing the utility poles along the sidewalk will free up space particularly at roadway intersections.
- Allow natural tree growth – utility undergrounding will eliminate deformed tree trimming by utility companies keeping tree limbs away from overhead wires
- Remove misshapen and unbalanced trees that reduce the risk of utility service outages during storms.

3. Please describe the potential <u>negative impacts</u> on the public and utility companies associated with the undergrounding of overhead distribution lines.

The very high cost may generate complaints from those who have to pay. Whatever funding scheme is chosen will result in some inequities.

Underground facilities are sometimes large, requiring long radiuses on conduits and large areas for surface mounted pads, transformers, switches, and other gears. These additional easements and land acquisition physical requirements may cause hardships and reduce developable area on some lots.

4. Please describe in detail the potential obstacles associated with the implementation of a program to relocate overhead distribution lines to

underground (for example, statutory, regulatory, technological, economic, safety, and physical obstacles.)

- Any large scale program to remove overhead utility lines must be implemented over several years for designers and contractors, and utility companies have limited capacity to perform the specialized projects.
- Utility distribution systems connect to individual buildings on private property. Time and resources must be provided to secure easements for new underground service to each property. The provision of new electric service often will require major reconfiguration of the electric feed through the building and upgrading of the circuit box. This work must be performed by a licensed electrician with the proper building permit.
- Time and resources must be provided to secure easements for surface mounted pads, transformers, switches, and other gears on private properties.
- Depending on the funding mechanism chosen, state law may need to be changed to give specific authority, for there will certainly be legal challenges.
- Complex multi-year funding schemes like the California model may carry a high administrative overhead cost.
- Depending on the funding mechanism chosen, it may be difficult to calculate the betterment and salvage value due from the utility company for each project.
- A mechanism must be found to avoid the IRS TERF costs.

5. Please describe the process of identifying the securing right-of-way easements for the relocation of existing overhead distribution lines to underground. What property rights issues would be raised as a result?

When overhead to underground utility conversion projects are designed in heavily urbanized areas like Arlington, space is not available for an unimpeded utility corridor; therefore, right-of-way limits cannot be determined until designs are finalized. Conduit system must be designed to snake through existing utilities while keeping proper clearances between them. Right-of-way needs are identified based upon final plans.

Arlington's experience is that several factors combine to make the process of acquiring right-of-way frustratingly slow:

- Acquisitions cannot begin until a utility undergrounding project is fully designed and ready to construct. It would be much more efficient if there were some standard width or location for utility service, so right-of-way acquisitions could occur concurrently with design.
- Utility companies, particularly Dominion Virginia Power, remind us they are an "overhead company" and the existing overhead configuration works fine. They are not motivated to aggressively pursue right-of-ways for utility undergrounding. Arlington staff must secure most underground right-of-way for utility companies if we want a project to proceed to construction.
- Modifications must be made to the interior of every building when utility service is converted from overhead to underground. Separate permission must be secured to work inside homes or businesses. A private electrician must be hired,

permits secured, work directed, etc. adding to the general complexity of the project, which is coordinated by Arlington staff.

- There is limited above-ground space for utility boxes (switches, transformers, etc.) associated with utility undergrounding. Boxes are not small, typically 6' long, 8' wide, and 4' tall. A large open area is required around each box allowing access doors to be opened, switches to be thrown during storms, etc.
- Arlington County is an urban community where land is very valuable. The utility boxes are considered bulky, unattractive, and take a lot of space, so these structures are typically unwanted by many property owners.

6. In order of importance, list the criteria that should be considered to determine whether the implementation of a program to relocate overhead distribution lines to underground is desirable.

The wishes of the local community should be paramount. The municipality should determine which parts of their community should have overhead utilities relocated underground, and in which order, based upon local conditions. Other considerations are the desires of utility companies based upon improving reliability of service, improving circuitry, reducing overhead maintenance costs (tree trimming) and similar exterminators.

7. In order of preference, describe the potential options for funding the relocation of overhead distribution lines to underground and explain the basis of your recommendation.

In addition to one of the options below, each community should develop and officially adopt geographic areas where overhead utilities are prohibited. In areas where overhead utilities are prohibited, no additional overhead facilities should be installed by any utility company beyond what exists today. Also, only underground service to new development would be allowed.

- The California model where a community can request an increase in their utility rates to fund projects to relocate overhead lines to underground. Utility companies would collect the funds, design and construct projects so over time would develop a cadre of engineers and project managers with these skills. All rate payers within a community would pay to fund the project, even if they do not directly benefit.
- Tax Improvement District funding managed by a community. Within the District, the real estate tax rate is effectively increased to fund undergrounding projects. All property owners would pay to fund the project, even if they do not directly benefit. Funding is external of utility companies and perpetuates the corporate cultural problems and attitude of "we are an overhead company."
- Statewide utility rate increase to fund utility undergrounding in urban communities. All rate payers statewide would pay to fund the project, even if they do not directly benefit.

- Funding by local communities through bond issues or general funds. The tremendous cost of projects makes this method impractical, for local budget are already stretched.

8. Should one or more pilot programs be conducted to determine more precisely the benefits, costs, and obstacles associated with the implementation of a program to relocated overhead distribution lines to underground? If pilot programs should be conducted, how could and should the pilot programs be funded?

There have been numerous projects built already using public, private and utility company funds in Arlington County. We see no benefit to a pilot project.

9. Considering the costs, benefits, and obstacles associated with the implementation of an undergrounding program, should the General Assembly require utilities to place all or a portion of existing and/or new overhead distribution lines underground? Alternatively, should such decisions be left to local government? Please explain your answer.

The General Assembly should require utility companies to adhere to the requirements of any locally designated "underground utility only" geographic area a locality may adopt. Currently, there is nothing to prohibit a utility from erecting poles and overhead facilities in areas where a locality prohibits such overhead utilities.

10. What obstacles, if any, currently prevent a local government from enacting an ordinance establishing all or a part of the locality as an area in which: (a) existing overhead utility distribution lines must be relocated underground over some period of time; and/or (b) all new utility distribution lines must be located underground?

The Code of Virginia does not provide specific authority for a local ordinance of this type. Therefore, enforcement would be in doubt.

11. For the specific purpose of funding the undergrounding of existing overhead utility distribution lines, what obstacles, if any, currently prevent a local government from levying a special tax on the residents and businesses of an area within the locality in which the local government has enacted an ordinance requiring the undergrounding of utility distribution lines? Would such a special tax assessment require specific new authorization from the General Assembly?

Specific authority within the Code of Virginia is preferable, see response to Question 10. More generally, special tax districts are established to provide revenue for a specific public project; however, the amount of the tax cannot exceed the particular benefit to a property owner. It is difficult to quantify and explain the benefit of converting overhead utilities to underground, particularly for a property owner who may not have overhead

wires in front of their home or business because the overhead lines are across the street on their particular street frontage.

12. Interested parties are invited also to address all other legal and policy issues they believe relevant to this investigation.

13. Please indicate below desired level of participation in the feasibility study.
Yes, placed on the distribution list for all correspondence.

Yes, considered as an active participant in the feasibility study.
Field of expertise: Utility undergrounding
Organization: Arlington County, VA

14. If you are interested in participating as an active participant, would you be willing to serve also as a member of a subgroup to identify, research, and analyze specific issues and provide written summaries of specific topics of study?
Yes.

15. Please provide the following contact information:
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16. Do you plan on attending the kickoff meeting in Richmond (specific location to be announced later) scheduled for 9:30 AM, Monday, August 16, 2004?
Yes, two attendees, Dennis Johnson and Eloisa Wade.